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TERMINAL (ENTER 1, 2, 3, OR ?):2
                     Welcome to STN International
NEWS 1
                 Web Page URLs for STN Seminar Schedule - N. America
NEWS 2
                 "Ask CAS" for self-help around the clock
NEWS 3 Feb 24 PCTGEN now available on STN
NEWS 4 Feb 24 TEMA now available on STN
NEWS 5 Feb 26 NTIS now allows simultaneous left and right truncation
NEWS 6 Feb 26 PCTFULL now contains images
NEWS 7 Mar 04 SDI PACKAGE for monthly delivery of multifile SDI results
NEWS 8 Mar 24 PATDPAFULL now available on STN
NEWS 9 Mar 24 Additional information for trade-named substances without
                 structures available in REGISTRY
NEWS 10 Apr 11 Display formats in DGENE enhanced
NEWS 11 Apr 14 MEDLINE Reload
NEWS 12 Apr 17 Polymer searching in REGISTRY enhanced
NEWS 13 Jun 13 Indexing from 1947 to 1956 added to records in CA/CAPLUS
NEWS 14 Apr 21 New current-awareness alert (SDI) frequency in
                 WPIDS/WPINDEX/WPIX
NEWS 15 Apr 28 RDISCLOSURE now available on STN
NEWS 16 May 05 Pharmacokinetic information and systematic chemical names
                 added to PHAR
NEWS 17 May 15 MEDLINE file segment of TOXCENTER reloaded
NEWS 18 May 15 Supporter information for ENCOMPPAT and ENCOMPLIT updated
NEWS 19 May 19 Simultaneous left and right truncation added to WSCA
NEWS 20 May 19 RAPRA enhanced with new search field, simultaneous left and
                 right truncation
NEWS 21 Jun 06 Simultaneous left and right truncation added to CBNB
NEWS 22 Jun 06 PASCAL enhanced with additional data
NEWS 23 Jun 20 2003 edition of the FSTA Thesaurus is now available
NEWS 24 Jun 25 HSDB has been reloaded
NEWS 25 Jul 16 Data from 1960-1976 added to RDISCLOSURE
NEWS 26 Jul 21 Identification of STN records implemented
NEWS 27 Jul 21 Polymer class term count added to REGISTRY
NEWS EXPRESS
             April 4 CURRENT WINDOWS VERSION IS V6.01a, CURRENT
             MACINTOSH VERSION IS V6.0b(ENG) AND V6.0Jb(JP),
             AND CURRENT DISCOVER FILE IS DATED 01 APRIL 2003
NEWS HOURS
             STN Operating Hours Plus Help Desk Availability
NEWS INTER
             General Internet Information
NEWS LOGIN
             Welcome Banner and News Items
NEWS PHONE
             Direct Dial and Telecommunication Network Access to STN
NEWS WWW
             CAS World Wide Web Site (general information)
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=> file agricola biosis embase caplus
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FULL ESTIMATED COST

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=> duplicate remove 12
DUPLICATE PREFERENCE IS 'AGRICOLA, BIOSIS, CAPLUS'
KEEP DUPLICATES FROM MORE THAN ONE FILE? Y/(N):n
PROCESSING COMPLETED FOR L2

L3 18 DUPLICATE REMOVE L2 (4 DUPLICATES REMOVED)

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L3 ANSWER 1 OF 18 CAPLUS COPYRIGHT 2003 ACS on STN

AN 2003:133983 CAPLUS

DN 138:182057

TI Usage of zinc finger proteins and their fusions with effector domains to regulate gene expression and metabolic pathways in plants

```
IN Barbas, Carlos F.; Stege, Justin T.; Guan, Xueni; Dalmia, Bipin
```

PA USA

SO U.S. Pat. Appl. Publ., 84 pp., Cont.-in-part of U.S. Ser. No. 620,897. CODEN: USXXCO

DT Patent

LA English

FAN.CNT 2

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
ΡI	US 2003037355	A1	20030220	US 2001-765555	20010119
PR	AI US 2000-177468P	P	20000121		
	US 2000-620897	A2	20000721		

- L3 ANSWER 2 OF 18 BIOSIS COPYRIGHT 2003 BIOLOGICAL ABSTRACTS INC. on STN
- AN 2003:300698 BIOSIS
- DN PREV200300300698
- TI Pectate lyase gene expression and enzyme activity in ***ripening*** banana fruit.
- AU Marin-Rodriguez, M. C.; Smith, D. L.; Manning, K.; Orchard, J.; Seymour, G. B. (1)
- CS (1) Plant Genetics and Biotechnology Department, Horticulture Research International, Wellesbourne, Warwickshire, CV35 9EF, UK: graham.seymour@hri.ac.uk UK
- SO Plant Molecular Biology, (April 2003, 2003) Vol. 51, No. 6, pp. 851-857. print.
 ISSN: 0167-4412.
- DT Article
- LA English
- L3 ANSWER 3 OF 18 CAPLUS COPYRIGHT 2003 ACS on STN
- AN 2002:367322 CAPLUS
- DN 136:364908
- TI DNA expression constructs with bidirectional promoters and agricultural uses
- IN Gan, Susheng; Xie, Mingtang; He, Yuehui
- PA University of Kentucky Research Foundation, USA
- SO U.S., 16 pp. CODEN: USXXAM
- DT Patent
- LA English
- FAN.CNT 1

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI US 6388170	B1	20020514	US 2000-545244	20000407
PRAI US 2000-545244		20000407		
RE.CNT 13 THERE	ARE 13	CITED REFERENCE	S AVAILABLE FOR T	THIS RECORD
ALL CI	TATIONS	AVAILABLE IN T	HE RE FORMAT	

- L3 ANSWER 4 OF 18 CAPLUS COPYRIGHT 2003 ACS on STN
- AN 2001:545414 CAPLUS
- DN 135:133107
- TI Usage of zinc finger protein to regulate gene expression and metabolic pathways in plants and creation of five zinc finger proteins
- IN Barbas, Carlos F., III; Stege, Justin T.; Guan, Xue Ni; Dalmia, Bipin
- PA Scripps Research Institute, USA
- SO PCT Int. Appl., 156 pp. CODEN: PIXXD2

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DT
     Patent
     English
LA
FAN.CNT 2
                KIND DATE
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     WO 2001052620 A2
PI
                          20010726
                                        WO 2001-US1817
                                                         20010119
     WO 2001052620
                     A3
                          20020207
         W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CR,
            CU, CZ, DE, DK, DM, DZ, EE, ES, FI, GB, GD, GE, GH, GM, HU, ID,
            IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV,
            MA, MD, MG, MK, MN, MW, MX, NO, RU, TJ, TM
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     AU 2001029641
                    A5 20010731
                                       AU 2001-29641
                                                        20010119
     EP 1276869
                     A2
                          20030122
                                       EP 2001-942508 20010119
        R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT,
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PRAI US 2000-177468P P
                          20000121
     US 2000-620897
                    Α
                          20000721
     WO 2001-US1817
                     W
                          20010119
L3
     ANSWER 5 OF 18 CAPLUS COPYRIGHT 2003 ACS on STN
AN
     1999:205351 CAPLUS
DN
     130:248758
    cDNA sequence of banana 1-aminocyclopropanecarboxylate synthase and
TI
     aminocyclopropanecarboxylate oxidase, and vectors containing cDNAs used
     for genetic ***transformation*** of plants
IN
    Bird, Colin Roger; Fletcher, Jonathon David
PΑ
    Zeneca Limited, UK
    U.S., 22 pp.
    CODEN: USXXAM
DT
    Patent
LA
    English
FAN.CNT 1
    PATENT NO.
                   KIND DATE
                                       APPLICATION NO. DATE
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    US 5886164
               A
                          19990323
                                        US 1996~632598 19960415
    US 6262346
                    B1 20010717
                                        US 1999-231240
                                                        19990115
PRAI US 1996-632598 A1
                          19960415
RE.CNT 12 THERE ARE 12 CITED REFERENCES AVAILABLE FOR THIS RECORD
             ALL CITATIONS AVAILABLE IN THE RE FORMAT
    ANSWER 6 OF 18 CAPLUS COPYRIGHT 2003 ACS on STN
L3
ΑN
    1999:626949 CAPLUS
DN
    132:149082
TI
    Sucrose phosphate synthase and sucrose synthase enzyme distribution during
    banana fruit ***ripening***
ΑU
    Bassinello, Priscila Z.; Fioravante, Ana Paula; Do Nascimento, Joao R. O.;
    Cordenunsi, Beatriz R.; Lajolo, Franco M.
CS
    Faculdade de Ciencias Farmaceuticas/USP - Depto. de Alimentos e Nutricao,
    Cidade Universitaria, Sao Paulo, 05508-900, Brazil
SO
    Ciencia e Tecnologia de Alimentos (1999), 19(1), 102-106
    CODEN: CTALDN; ISSN: 0101-2061
PB
    Sociedade Brasileira de Ciencia e Tecnologia de Alimentos
DT
    Journal
LA
    Portuguese
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THERE ARE 17 CITED REFERENCES AVAILABLE FOR THIS RECORD
RE.CNT 17
             ALL CITATIONS AVAILABLE IN THE RE FORMAT
L3
     ANSWER 7 OF 18 CAPLUS COPYRIGHT 2003 ACS on STN
AN
     1998:790686 CAPLUS
DN
     130:34020
     Genetic control of fruit
                             ***ripening***
     Bird, Colin Roger; Medina-Suarez, Rosybel De Jesus; Seymour, Graham Barron
TN
PΑ
     Zeneca Ltd., UK
     PCT Int. Appl., 78 pp.
SO
     CODEN: PIXXD2
DT
     Patent
LA
     English
FAN.CNT 1
                KIND DATE
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PΙ
     WO 9853085 A1
                          19981126
                                       WO 1998-GB1297 19980505
        W: AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CU, CZ, DE,
            DK, EE, ES, FI, GB, GE, GH, GM, GW, HU, ID, IL, IS, JP, KE, KG,
            KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MD, MG, MK, MN, MW, MX,
            NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT,
            UA, UG, US, UZ, VN, YU, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM
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            CM, GA, GN, ML, MR, NE, SN, TD, TG
     AU 9872257
                    A1
                          19981211
                                       AU 1998-72257
                                                        19980505
    US 2002026657
                     A1
                          20020228
                                       US 2001-949052
                                                        20010907
PRAI GB 1997-10370
                     Α
                          19970520
    WO 1998-GB1297
                     W
                          19980505
RE.CNT 11
             THERE ARE 11 CITED REFERENCES AVAILABLE FOR THIS RECORD
             ALL CITATIONS AVAILABLE IN THE RE FORMAT
    ANSWER 8 OF 18 CAPLUS COPYRIGHT 2003 ACS on STN
L3
AN
    1998:184020 CAPLUS
DN
    128:253783
ΤI
    Genetic control of fruit ***ripening***
                                              and senescence in banana
IN
    Seymour, Graham Barron; Bird, Colin Roger; Medina-Suarez, Rosybel De Jesus
    Zeneca Limited, UK; Seymour, Graham Barron; Bird, Colin Roger;
    Medina-Suarez, Rosybel De Jesus
SO
    PCT Int. Appl., 65 pp.
    CODEN: PIXXD2
DT
    Patent
FAN.CNT 1
    PATENT NO.
                 KIND DATE
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    WO 9811228
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PΙ
                          19980319
                                       WO 1997-GB2424
                                                        19970908
    WO 9811228
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            AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CU, CZ, DE,
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            LK, LR, LS, LT, LU, LV, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT,
            RO, RU, SD, SE, SG, SI, SK, TJ, TM, TR, TT, UA, UG, US, UZ, VN,
            YU, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM
        RW: GH, KE, LS, MW, SD, SZ, UG, ZW, AT, BE, CH, DE, DK, ES, FI, FR,
            GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA,
            GN, ML, MR, NE, SN, TD, TG
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AU 1997-41291 19970908

AU 9741291

A1 19980402

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EP 931150
                    A2 19990728 EP 1997-939069
                                                       19970908
        R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT,
            IE, FI
     JP 2000517164
                    T2
                         20001226
                                   JP 1997-533834 19970908
PRAI GB 1996-18862
                    A 19960910
     GB 1997-8366
                    A 19970425
     WO 1997-GB2424
                    W 19970908
    ANSWER 9 OF 18 CAPLUS COPYRIGHT 2003 ACS on STN
L3
AN
     1997:696590 CAPLUS
DN
    127:330642
TI
    Method and apparatus for ***ripening*** perishable products in a
    temperature controlled room
    Mizera, Grzegorz Pawel; Franaszek, Stanislaw
IN
PA
    Chiquita Brands, Inc., USA
SO
    PCT Int. Appl., 47 pp.
    CODEN: PIXXD2
DT
    Patent
LA
    English
FAN.CNT 1
    PATENT NO.
                KIND DATE
                                      APPLICATION NO. DATE
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PΙ
    WO 9737545
                                      WO 1997-US5646 19970404
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        W: AU, CZ, JP, NO
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    AU 9724411
                   A1 19971029 AU 1997-24411 19970404
    EP 906024
                   A1
                         19990407
                                      EP 1997-920146
                                                      19970404
        R: BE, DE, FR, GB, NL, IE, FI
PRAI PL 1996-313751
                         19960411
    PL 1996-313804
                         19960415
    US 1997-781824
                         19970110
    WO 1997-US5646
                        19970404
L3
    ANSWER 10 OF 18 CAPLUS COPYRIGHT 2003 ACS on STN
AN
    1997:157317 CAPLUS
DN
    126:235991
    Biochemical pathways for the formation of esters in ***ripening***
ΤI
ΑU
    Wyllie, S. Grant; Leach, D. N.; Nonhebel, H. N.; Lusunzi, I.
    Centre for Biostructural and Biomolecular Research, University of Western
CS
    Sydney, New South Wales, 2753, Australia
    Special Publication - Royal Society of Chemistry (1996), 197(Flavour
SO
    Science), 52-57
    CODEN: SROCDO; ISSN: 0260-6291
PB
    Royal Society of Chemistry
DT
    Journal
LA
    English
=> d 13 11-18
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- L3 ANSWER 11 OF 18 BIOSIS COPYRIGHT 2003 BIOLOGICAL ABSTRACTS INC. on STN DUPLICATE 1
- 1989:268400 BIOSIS AN
- DN BA88:4482
- CORRELATION BETWEEN INCREASE IN 6 PHOSPHOFRUCTOKINASE ACTIVITY AND TIAPPEARANCE OF THREE MULTIPLE FORMS IN ***RIPENING***

- AU IYER M G; KAIMAL K S; NAIR P M
- CS FOOD TECHNOL. ENZYME ENGINEERING DIV., BHABHA ATOMIC RES. CENT., BOMBAY 400 085, INDIA.
- SO PLANT PHYSIOL BIOCHEM (PARIS), (1989) 27 (1), 99-106. CODEN: PPBIEX. ISSN: 0981-9428.
- FS BA; OLD
- LA English
- L3 ANSWER 12 OF 18 CAPLUS COPYRIGHT 2003 ACS on STN
- AN 1988:527508 CAPLUS
- DN 109:127508
- TI Starch ***transformation*** during banana ***ripening*** : the amylase and glucosidase behavior
- AU Garcia, Elisabeth; Lajolo, Franco M.
- CS Fac. Cienc. Farm., USP, Sao Paulo, Brazil
- SO Journal of Food Science (1988), 53(4), 1181-6 CODEN: JFDSAZ; ISSN: 0022-1147
- DT Journal
- LA English
- ANSWER 13 OF 18 AGRICOLA Compiled and distributed by the National Agricultural Library of the Department of Agriculture of the United States of America. It contains copyrighted materials. All rights reserved.

 (2003) on STN

 DUPLICATE 2
- AN 83:97635 AGRICOLA
- DN IND83083655
- TI Starch-sugar ***transformation*** during banana ***ripening*** : the behavior of UDP glucose pyrophosphorylase, sucrose synthetase and invertase ***Musa*** acuminata, uridine diphosphate.
- AU Terra, N.N.; Garcia, E.; Lajolo, F.M.
- AV DNAL (389.8 F7322)
- SO Journal of food science., July/Aug 1983 Vol. 48, No. 4. p. 1097-1100 Publisher: Chicago: Institute of Food Technologists. ISSN: 0022-1147
- NTE Includes references.
- DT Article
- FS U.S. Imprints not USDA, Experiment or Extension
- LA English
- ANSWER 14 OF 18 AGRICOLA Compiled and distributed by the National Agricultural Library of the Department of Agriculture of the United States of America. It contains copyrighted materials. All rights reserved.

 (2003) on STN

 DUPLICATE 3
- AN 82:45742 AGRICOLA
- DN IND82029695
- TI Starch ***transformation*** during banana ***ripening*** . I. The phosphorylase and phosphatase behavior in ***Musa*** acuminata.
- AU Areas, J.A.G.; Lajolo, F.M.
- AV DNAL (TX545.J6)
- SO Journal of food biochemistry., 1981 Vol. 5, No. 1. p. 19-37 ill Publisher: Westport, Conn., Food and Nutrition Press. ISSN: 0145-8884
- NTE Includes 35 ref.
- DT Article
- FS U.S. Imprints not USDA, Experiment or Extension
- LA English

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ANSWER 15 OF 18 CAPLUS COPYRIGHT 2003 ACS on STN
ΑN
     1972:83667 CAPLUS
DN
     76:83667
TI
     Biochemical changes in banana during ***ripening***
ΑŰ
     Sgarbieri, Valdomiro C.; Figueiredo, Iovaldo B.
CS
     Inst. Tecnol. Aliment., Campinas, Brazil
     Revista Brasileira de Tecnologia (1971), 2(2), 85-94
     CODEN: RBTNAO; ISSN: 0370-3835
DT
     Journal
ĹΑ
     Portuguese
1.3
     ANSWER 16 OF 18 CAPLUS COPYRIGHT 2003 ACS on STN
AN
     1970:486725 CAPLUS
DN
     73:86725
TI
     Variations in the composition of Poyo bananas ( ***Musa*** acuminata)
             ***ripening***
ΑU
     Rocchetti, Giuseppe; Cozzi, Paolo
CS
     Lab. Chim. Technol. Agr., Ist. Agron. Oltremare, Italy
     Rivista di Agricoltura Subtropicale e Tropicale (1969), 63(10-12), 457-70
     CODEN: RSTTAP; ISSN: 0035-6026
DT
     Journal
     Italian
LA
L3
     ANSWER 17 OF 18 CAPLUS COPYRIGHT 2003 ACS on STN
AN
     1968:112221 CAPLUS
DN
     68:112221
                   ***transformations***
TI
     Biochemical
                                          occurring during the
       ***ripening*** of bananas. I. Pulp-to-peel ratio, total and soluble
     solids, organic acids, and carbohydrates
ΑU
     Sgarbieri, Valdemiro C.; Figueiredo, Iovaldo B.
     Centro Trop. Pesqui. Tecnol. Aliment., Campinas, Brazil
CS
     Anais da Associacao Brasileira de Quimica (1967), 26(1-2), 49-66
     CODEN: AABQAL; ISSN: 0365-0073
DT
     Journal
LA
     Portuguese
L3
     ANSWER 18 OF 18 CAPLUS COPYRIGHT 2003 ACS on STN
ΑN
     1967:481271 CAPLUS
DN
     67:81271
ΤI
     Biochemical ***transformations***
                                          during banana
ΑU
     Figueiredo, Iovaldo B.; Sgarbieri, Valdemiro C.
    Centro Trop. Pesq. Tecnol. Alimentos, Campinas/Sao Paulo, Brazil
    Arquivos Brasileiros de Nutricao (1965), 21(1), 65-86
     CODEN: ABNUAW; ISSN: 0365-0782
DT
     Journal
LA
    Portuguese
=> s banana and pectate(w)lyase
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PROCESSING COMPLETED FOR L4
L5
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- L5 ANSWER 1 OF 9 BIOSIS COPYRIGHT 2003 BIOLOGICAL ABSTRACTS INC. on STN DUPLICATE 1
- AN 2003:300698 BIOSIS
- DN PREV200300300698
- TI ***Pectate*** ***lyase*** gene expression and enzyme activity in ripening ***banana*** fruit.
- AU Marin-Rodriguez, M. C.; Smith, D. L.; Manning, K.; Orchard, J.; Seymour, G. B. (1)
- CS (1) Plant Genetics and Biotechnology Department, Horticulture Research International, Wellesbourne, Warwickshire, CV35 9EF, UK: graham.seymour@hri.ac.uk UK
- SO Plant Molecular Biology, (April 2003, 2003) Vol. 51, No. 6, pp. 851-857. print.
 ISSN: 0167-4412.
- DT Article
- LA English
- L5 ANSWER 2 OF 9 BIOSIS COPYRIGHT 2003 BIOLOGICAL ABSTRACTS INC. on STN DUPLICATE 2
- AN 2003:311702 BIOSIS
- DN PREV200300311702
- TI ***Pectate*** ***lyase*** activity during ripening of ***banana*** fruit.
- AU Payasi, Anurag; Sanwal, G. G. (1)
- CS (1) Department of Biochemistry, University of Lucknow, Lucknow, 226 007, India: girdharsanwal@yahoo.com India
- SO Phytochemistry (Amsterdam), (June 2003, 2003) Vol. 63, No. 3, pp. 243-248. print.

 ISSN: 0031-9422.
- DT Article
- LA English
- L5 ANSWER 3 OF 9 BIOSIS COPYRIGHT 2003 BIOLOGICAL ABSTRACTS INC. on STN DUPLICATE 3
- AN 2001:303111 BIOSIS
- DN PREV200100303111
- TI Survival of memory T cells specific for Japanese cypress pollen allergen is maintained by cross-stimulation of putative ***pectate***

 lyases from other plants.
- AU Nakamura, Y. (1); Takagi, S.; Suzuki, M.; Ito, H.; Murakami, S.; Ohta, N.
- CS (1) Department of Otorhinolaryngology, Nagoya City University Medical School, 1 Azakawasumi, Mizuhocho, Mizuhoku, Nagoya, 467-8601 Japan
- SO Allergy (Copenhagen), (May, 2001) Vol. 56, No. 5, pp. 385-392. print. ISSN: 0105-4538.
- DT Article
- LA English
- SL English
- L5 ANSWER 4 OF 9 BIOSIS COPYRIGHT 2003 BIOLOGICAL ABSTRACTS INC. on STN DUPLICATE 4
- AN 2001:453578 BIOSIS
- DN PREV200100453578
- TI Isolation and expression of two ***pectate*** ***lyase*** genes during fruit ripening of ***banana*** (Musa acuminata.
- AU Pua, Eng-Chong (1); Ong, Choon-Kiat; Liu, Pei; Liu, Jian-Zhong

```
CS
     (1) Plant Genetic Engineering Laboratory, Department of Biological
     Sciences, Faculty of Science, National University of Singapore, 10 Kent
     Ridge Crescent, Singapore, 119260: dbspuaec@mus.edu.sg Republic of
     Singapore
     Physiologia Plantarum, (September, 2001) Vol. 113, No. 1, pp. 92-99.
SO
     print.
     ISSN: 0031-9317.
DT
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LA
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\mathtt{SL}
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L5
     ANSWER 5 OF 9 CAPLUS COPYRIGHT 2003 ACS on STN
ΑN
     1998:184020 CAPLUS
DN
     128:253783
ΤI
     Genetic control of fruit ripening and senescence in ***banana***
IN
     Seymour, Graham Barron; Bird, Colin Roger; Medina-Suarez, Rosybel De Jesus
     Zeneca Limited, UK; Seymour, Graham Barron; Bird, Colin Roger;
     Medina-Suarez, Rosybel De Jesus
SO
     PCT Int. Appl., 65 pp.
     CODEN: PIXXD2
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PRAI GB 1996-18862
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    ANSWER 6 OF 9 AGRICOLA Compiled and distributed by the National
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     (2003) on STN
                                                     DUPLICATE 5
    1998:53864 AGRICOLA
AN
DN
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    A cDNA clone highly expressed in ripe
TI
                                          ***banana***
                                                         fruit shows
    homology to ***pectate*** ***lyases***
ΑU
    Dominguez-Puigjaner, E.; Llop, I.; Vendrell, M.; Prat, S.
ΑV
    DNAL (450 P692)
    Plant physiology, July 1997. Vol. 114, No. 3. p. 1071-1076
SO
    Publisher: Rockville, MD: American Society of Plant Physiologists, 1926-
    CODEN: PLPHAY; ISSN: 0032-0889
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- NTE Includes references
- CY Maryland; United States
- DT Article; Conference
- FS U.S. Imprints not USDA, Experiment or Extension
- LA English
- ANSWER 7 OF 9 AGRICOLA Compiled and distributed by the National Agricultural Library of the Department of Agriculture of the United States of America. It contains copyrighted materials. All rights reserved.

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 DUPLICATE 6
- AN 1998:22435 AGRICOLA
- DN IND20625098
- TI ***Pectate*** ***lyase*** of Colletotrichum gloeosporioides attacking avocado fruits: cDNA cloning and involvement in pathogenicity.
- AU Wattad, C.; Kobiler, D.; Dinoor, A.; Prusky, D.
- AV DNAL (SB599.P45)
- SO Physiological and molecular plant pathology, Mar 1997. Vol. 50, No. 3. p. 197-212
 - Publisher: London; Orlando: Academic Press, c1986-
- CODEN: PPPYBC; ISSN: 0885-5765
- NTE Includes references
- CY England; United Kingdom
- DT Article
- FS Non-U.S. Imprint other than FAO
- LA English
- L5 ANSWER 8 OF 9 CAPLUS COPYRIGHT 2003 ACS on STN
- AN 1988:146782 CAPLUS
- DN 108:146782
- TI ***Pectate*** ***lyases*** of Erwinia chrysanthemi: Pel E-like polypeptides and pelE homologous sequences in strains isolated from different plants
- AU Thurn, K. K.; Barras, F.; Kegoya-Yoshino, Y.; Chatterjee, A. K.
- CS Dep. Plant Pathol., Kansas State Univ., Manhattan, KS, 66506, USA
- SO Physiological and Molecular Plant Pathology (1987), 31(3), 429-39 CODEN: PMPPEZ; ISSN: 0885-5765
- DT Journal
- LA English
- L5 ANSWER 9 OF 9 BIOSIS COPYRIGHT 2003 BIOLOGICAL ABSTRACTS INC. on STN DUPLICATE 7
- AN 1980:264677 BIOSIS
- DN BA70:57173
- TI MACERATING ENZYME PRODUCTION BY COLLETOTRICHUM-MUSAE AND FUSARIUM-SEMITECTUM INCITANTS OF ***BANANA*** MUSA-ACUMINATA FRUIT DECAY.
- AU SHILLINGFORD C A; SINCLAIR J B
- CS DEP. PLANT PATHOL., UNIV. ILL., URBANA, ILL. 61801, USA.
- SO PHYTOPATHOL Z, (1980) 97 (2), 127-135.
 - CODEN: PHYZA3. ISSN: 0031-9481.
- FS BA; OLD
- LA English

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SINCE FILE TOTAL ENTRY SESSION

FULL ESTIMATED COST 59.77 59.98

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FILE CONTAINS CURRENT INFORMATION.

LAST RELOADED: Jul 11, 2003 (20030711/UP).

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- L5 ANSWER 1 OF 9 BIOSIS COPYRIGHT 2003 BIOLOGICAL ABSTRACTS INC. on STN DUPLICATE 1
- AB Two distinct cDNA clones showing sequence homology to higher-plant

 pectate ***lyase*** (Pel) genes were isolated from ripening

 banana fruits. The transcripts were detected only in fruit tissue
 and both were strongly ripening-related. Yeast transformation with the

 most highly expressed Pel clone produced a recombinant protein with

 pectate ***lyase*** activity, demonstrating that this
 sequence

was likely to encode a ***pectate*** ***lyase*** protein in planta. An assay developed for measuring the action of the endogenous enzyme from ***banana*** pulp tissue revealed a significant increase in calcium-dependent ***pectate*** ***lyase*** activity during ripening. The enhanced levels of enzyme activity corresponded with an increase in soluble polyuronides from ***banana*** pulp.

- L5 ANSWER 2 OF 9 BIOSIS COPYRIGHT 2003 BIOLOGICAL ABSTRACTS INC. on STN DUPLICATE 2
- ***Pectate*** ***lyase*** (PEL) activity was demonstrated in ripe
 banana fruits on supplementing the homogenizing medium with
 cysteine and Triton X-100. The enzyme was characterized on the basis of
 alkaline pH optimum, elimination of the activity by EDTA and activation by
 Ca2+. PEL activity was not detected in preclimacteric ***banana***
 fruits. PEL activity increased progressively from early climacteric and
 reached maximum level at climacteric peak and declined in post climacteric
 and over ripened fruits. Replacing pectate with pectin in PEL assay
 manifested enzyme activity even in preclimacteric fruits. In contrast to
 PEL, polygalacturonase activity progressively increased during fruit
 ripening even in postclimacteric fruits.
- L5 ANSWER 3 OF 9 BIOSIS COPYRIGHT 2003 BIOLOGICAL ABSTRACTS INC. on STN DUPLICATE 3
- AB In view of recent studies on the mechanisms of the survival of peripheral memory T cells, we tested the biologic role of ***pectate***

 lyase , a pectin-degrading enzyme, as the cross-reactive antigen required for the recurring survival signals for human T cells specific for Cha o 1, a pollen allergen molecule of the Japanese cypress. We determined a 16-mer epitope peptide for the T-cell clone, and prepared synthetic oligopeptides of homologous regions in putative ***pectate***

lyase of other plants. Of these homologous peptides, ZePel (Zinnia

elegans), ban 17 (***banana***), and Amb a 1.1 (short ragweed) induced

strong proliferative responses of the Cha o 1-specific T-cell clone in vitro. In addition, suboptimal doses of peptide homologs derived from ***banana*** and short ragweed enhanced the survival potency of this T-cell clone without detectable proliferative responses to the peptides. When there was no antigen stimulation, the T-cell clone decreased in viable cell number and lost antigen-specific proliferation activity on day 6 during in vitro incubation. On the other hand, T-cell clones incubated with these survival-inducing peptides maintained proliferative activity to Cha o 1 even on day 9. Serum derived from the donor patient did not contain detectable levels of IqE specific to ***banana*** ragweed by CAP-RAST. These results show that human T cells specific for pollen allergen seem to use cross-reactive ***pectate*** peptides to deliver survival signals even in the absence of pollen allergen, and memory T cells maintained in such a manner might be functioning at the onset of allergic pollinosis, although pollen allergens are seasonal.

L5 ANSWER 4 OF 9 BIOSIS COPYRIGHT 2003 BIOLOGICAL ABSTRACTS INC. on STN DUPLICATE 4

AB Two cDNAs, designated MWPL1 and MWPL2, encoding putative ***lyases*** (Pel; EC 4.2.2.2), which catalyze the cleavage by beta-elimination of alpha-1fwdarw4-linked galacturonosyl residues of pectins found mostly in middle lamella and primary cell wall in plants, were isolated from ripening fruit of ***banana*** (Musa acuminata) and their expressions in fruit during ripening and in response to ethylene were investigated. MWPL1 and MWPL2 encode a single polypeptide of 407 and 454 amino acid residues, respectively. The two cDNAs shared an overall identity of 75% in both nucleotide and deduced amino acid sequences. Sequence comparison of MWPL1 and other plant Pels revealed the homology ranging from 76% with zinnia to 48% with ragweed. Southern analysis indicated that MWPL1 might be present as a single copy gene, and there might be up to two copies of MWPL2 in the ***banana*** genome. The two cDNAs were expressed differentially and/or spatially in various ***banana*** organs, with female flower and fruit tissues showing accumulation of the MWPL2 transcript, which was not detected in root, pseudostem, leaf, male flower and ovary, whereas the MWPL1 transcript was not detectable in all organs tested. In fruit tissue during ripening, although transcripts of both members were not detectable in unripe preclimacteric fruits, they began to accumulate as ripening progressed and the level remained high thereafter in overripe fruits. However, the magnitude of transcript accumulation differed between the two Pel members, with substantially more abundant MWPL2 than MWPL1 in ripening fruit. Similar differential transcript accumulation was also observed between peel and pulp, where the former was markedly higher than the latter. Expression of both Pel members was also affected by exogenous ethylene, whose presence at 5-100 ppm stimulated accumulation of MWPL1 and MWPL2 transcripts in preclimacteric fruit, suggesting that ethylene may play an important regulatory role in regulating Pel expression during fruit

ripening of the

banana

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COST IN U.S. DOLLARS

SINCE FILE TOTAL

ENTRY SESSION FULL ESTIMATED COST

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